for studies and research with respect to air contaminants, air pollution and the control, prevention, abatement, and reduction of air pollution."

The present role of the Federal Government in air pollution control has permitted and assisted the development of effective and practical State air pollution control pro-grams. The importance of the present Federal air pollution control program was recognized at the 1961 meeting of the Association of State and Territorial Officers, where it was recommended that "that the Federal air pollution program be strengthened by (a) providing for an expansion of research re-lated to the causes, effects, and control of air pollution; (b) providing Federal tech-nical and financial assistance to States and localities in the development and support of programs to apply more effectively existing and future knowledge of the actual control of air pollution; and (c) providing through the Public Health Service of the U.S. De-partment of Health, Education, and Welfare vigorous leadership to obtain increased attention and devotion of greater resources to

the problem of air pollution by all levels of government, industry, and the public."

Rapid increases in the rate of urbanization, industrialization, and population growth make it imperative that greater efforts be about a bloom all a property in the time. made to obtain cleaner air. Now is the time to expand our efforts, before a wasteful crash program is needed. Economic and health considerations justify greater efforts for

cleaner air.

Air pollution can exert biological effects on man, vegetation, and animals and produce physical effects such as reduction in visability, corrosion of metals, and soiling.

Gases, vapors, and particulates that pollute the air exert many as yet poorly understood effects upon man. So far as has been discovered they act both locally upon the mucous membranes with which they have direct contact, and also generally upon many varied functions of the body through absorption into the bloodstream. The local effects apparently result from both chemical and physical irritation, whereas the systemic, general effects, are primarily chemical in nature.

Air pollutants occasionally are able to cause dramatic, sudden epidemics of illness, which first drew attention to the importance of the health effects of air pollution.

During a 2-week period in 1952, for example, more than 4,000 deaths in London were attributed to very high concentrations of pollutants, of which sulfur dioxide and carbonaceous smoke seemed the most significant components. Measurements made during the 1962 London smog incident indicated the presence of high atmospheric con-centrations of oxides of sulfur. Oxides of sulfur were most likely an important factor in the October 1948 Donora, Pa., smog disaster. It is unfortunate that often disasters provide impetus for governmental action. The Donora disaster was a major factor in bringing the growing problem of air pollution to the attention of State and local governments.

But even more dangerous than these dramatic epidemics are the long-term insidious effects of prolonged exposure to lower concentrations of pollutants. Such air pollution is probably playing an important role in such increasingly common and serious diseases as lung cancer, chronic bronchitis, emphysema, asthma, and certain other respiratory disorders.

Air pollution undoubtedly has other effects upon man as well, including annoying eye irritation and objectionable odors. The importance of the changes air pollution causes in the kinds of solar radiation we receive and the possible physiological significance of such changes is yet to be determined.

Vegetation can be affected by gaseous and particulate pollution. Injury can range from reduced growth and yield to complete plant destruction. Transfer to man and animals of pollutants concentrated in edible vegetation is also possible. Among the pollutants known to have caused vegetation damage are gases such as sulfur dioxide, ammonia, ethylene, ozone, and photochemical smog reaction products, and particulate matter such as sulfuric acid mist, carbonaceous smoke, and metal dusts. Livestock may be indirectly injured through acute or chronic poisoning from eating contaminated forage.
Reduced visibility due to suspended par-

ticulates is an important physical effect and depends on the composition, size, and concentration of the suspended particles. Not only does suspended matter directly reduce visual range but it can also promote fog formation and increase its persistence. Carbonaceous smoke, sulfuric acid mist, aerosols from automotive exhausts, and perhaps photochemical smog are the main contributors to visibility reduction.

Metal corrosion due to both gaseous and particulate pollution, particulate damage to stone and masonry, and gaseous injury to textiles, leather, and rubber goods are among the most important physical effects. Soiling is the most obvious of all air pollution effects. Coarse particles can mar or damage buildings, automobiles, and scenic attractions. Fine particles can infiltrate homes and businesses soiling walls, furniture, and decorations, and can reduce the value of salable products, or interfere with fine products' manufacturing.

State and local governmental agencies are developing programs to effectively combat the effects of air pollution. A Federal air pollution control program, recognizing the effectiveness of State and local agencies, can be of considerable assistance. H.R. 4415, amended in accordance with our recommendations to provide for concurrence by the State with respect to the awarding of program grants to local agencies, can provide this assistance.

I sincerely appreciate being given the opportunity to appear before this committee and I hope that this statement of views will be of assistance in your review of proposed air pollution control legislation.

Petite Deterrent: Quandary for Western Policy

EXTENSION OF REMARKS

HON. JEFFERY COHELAN

OF CALIFORNIA

IN THE HOUSE OF REPRESENTATIVES Thursday, February 21, 1963

Mr. COHELAN. Mr. Speaker, the decision by President de Gaulle to develop an independent nuclear deterrent has raised serious and important questions for both American and NATO defense policies.

Robert Keatly, in a March 6 Wall Street Journal article, has made a very thoughtful analysis of this difficult problem area, and I am sure that our colleagues will find it both interesting and of value:

PETITE DETERRENT-FRENCH A-FORCE MAY HAVE MORE VALUE THAN UNITED STATES

(By Robert Keatley)

Paris.—"You Americans call ours a policy of grandeur; we consider it one of humility."

These words from a leading French military theorist sum up his Government's rationale for its independent nuclear deterrent-the often-belittled force de frappe, or striking force. It's clear the French are determined to push ahead with their weapons program despite strong American objections. It also appears the force may have more military value than U.S. policymakers generally like to concede.

This far-reaching effort, which will cost an estimated \$4.8 billion by 1965 (and much more later), is General de Gaulle's solution to a problem that has vexed him for years: If shooting starts, he doubts if American strategists will consider France important enough to defend with nuclear weapons, despite the solemn pledges of President Ken-nedy and his predecessors, "Who can assure France that an aggression against her alone would unleash in time and unconditionally the riposte of an ally?" he has asked.

Without nuclear weapons, French leaders don't believe their territory can be defended against the Russians' 150 Red Army divisions. Therefore, France will build its own nuclear force with the most modern planes, missiles and explosives it can develop.

To do otherwise, an influential French admiral reasons, would be as senseless as using cannonballs while the enemy fires explosive shells.

A TWO-STAGE EFFORT

The force de frappe is being put together in two stages. Backbone of the first will be some 50 supersonic, needle-nosed Mirage IV bombers, each capable of carrying a French atom bomb with explosive power of 75,000 tons of TNT, four times as powerful as the one which destroyed Hiroshima. Three prototype models are now flying (a fourth crashed recently), and the entire group is expected to be operational in 1965. Not long after, defense officials hope to add an airlaunched missile which will carry a nuclear warhead the last 300 miles or so to target.

But the second stage is more significant. Shut off from American technical aid, President de Gaulle's researchers are simultaneously developing hydrogen bombs, solid fuel ballistic missiles and nuclear submarines. Most observers believe the French will develop a submarine-launched missile system. velop a submarine-naunched missile system, though the possibility of choosing land-based missiles or more advanced aircraft still exists. Says a U.S. Navy officer familiar with both American and French programs: We have no doubt at all about their ability to have a Polaris-type system operational by 1970." French scientists have already first French scientists have already fired a half-dozen experimental rockets, including one with a complex guidance system, and are building a diesel-engined submarine which will be used for firing test rockets and training crews. Work on nuclear propulsion is also well advanced.

It's believed the French are considering

force of three nuclear subs, each armed with 16 missiles. Two would be kept on station at all times, providing enough firepower to destroy up to 32 Russian cities if France is attacked.

IMPACT ON NATO

American officials deplore this effort. They believe France's go-it-alone attitude is shattering Western unity, undermining effectiveness of NATO, and—along with recent rejection of British entry into the Common Market—is preventing formation of the interdependent Atlantic alliance which Washington sees as the only practical way to oppose Communist influence in Europe. Americans also argue that the French force has no significant military value in any case; that the Mirage is aptly named.

The French, of course, disagree strongly. If a war broke out, they say, the shooting would be over before officials of a multination nuclear force could decide whether or

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not to fight back. They also argue that their deterrent has considerable military value, a point of view that wins grudging support in some not entirely friendly quar-

Distrust of the United States is the base for much of the French activity. Perhaps the clearest exposition comes from retired air force Gen. Plerre Gallois, now an official of the company which produces Mirage bombers and often called General de Gaulle's chief military adviser (though for one diplomat, he is simply the only man "who can weave De Gaulle's prejudices into any rational pattern"). General Gallois, a short and energetic man, advances the humility argument, saying France's survival may not always be vital to U.S. interests.

"We are a small nation," he says, "and

"We are a small nation," he says, "and with the advent of new weapons, our strategic value is limited. So we want to be able to tell the Russians: If you attack us, we will respond with nuclear weapons and destroy 1, 2, or 20 of your cities. And what will that gain you? Your chief adversary, the United States, will remain undamaged while you will have merely added the rubble of France to some ashes in your own ter-

But if France could only respond with conventional weapons, the Russians might attack with their nonnuclear might and France "would fail in a matter of hours," he concludes.

The French don't view this as an attempt to replace America as the protector of Western Europe. "This force has no value other than to protect Continental France," concedes General Gallois. Defense experts here readily admit the force de frappe will never be strong enough to permit the country to embark on Suez-type ventures even if it wanted to.

But it seems, writes a leading submarine advocate, that "the unique striking power of the new weapon is such that a relatively restricted number of deployed units allowing them to be utilized with efficiency, can threaten the eventual aggressor with counterattacks grave enough to deter the employment of such arms against us."

ment of such arms against us."

American officials conceded this has a certain logic though one adds "like everything else in France it's somewhat romantic." But they argue that the first stage of the French force is obsolete before it's even completed. U.S. experts regularly criticize the Mirage bomber force; they point to strong antiaircraft defenses the Russians are building, and to the short range of the French planes (the Mirage IV can reach Moscow from here only if it files at subsonic speeds; otherwise aerial refueling is needed).

Gaullists offer several counter arguments. For one thing, they have ordered 12 Boeingbuilt KC-135 jet tankers for \$4.5 million each. They also claim launching all available planes will confuse Soviet radar and missile defenses and ease some Mirage IV's

through to targets.

But more important, they believe the United States seriously overestimates the Soviet defense capability, and underestimates the effectiveness of low-level bombing attacks, for which the Mirage is designed. Officially, they claim 1 of 3 attack planes can penetrate Russian defenses; privately, they say 1 in 10 is more realistic but is enough to deter attacks. They believe the Mirage IV's can swoop in under radar beams, which can't bend to fit the curve of the searth

A MODEL-T POLARIS

Many knowledgeable sources back up the French view. The U.S. Air Force's manned bomber advocates have been using similar arguments with Pentagon officials for years. And at the Ministry of Defense in London, a high British official says. "There is some

question about whether radar has any value at all against low-level attacks."

Later weapons will be more sophisticated. Though French scientists would like American assistance, especially on warheads and missile guidance, it's generally acknowledged they can develop a Polaris-type system on their own not long after the British have theirs. For one thing, explains a U.S. naval expert, France may build a less refined system and save both time and money. Guidance may not be as precise as for the U.S. Polaris, and the sub may even have to surface to fire. "Theirs might be sort of a model T compared to ours, but all De Gaulle wants is to be able to blast Moscow off the face of the earth," he says.

Diplomats doubt little France's ability to

Diplomats doubt little France's ability to pay the bills. One major reason: Since the Algerian War ended, it has cut down conventional forces; defense planners may further reduce the army from 700,000 to 450,000. "In the past 6 years," complains one disgruntled defense expert, "we spent \$16 billion on soldiers' shoes, social security and barracks—we could have built three nuclear research plants a year for that."

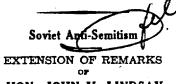
RESEARCH BYPRODUCTS?

Even if the program flops militarily, some argue its basic research will aid the French economy. One American expert believes it may improve the French school system, which he says produces brilliant scientists but not enough engineers and technicians. For General Gallois, "even if the whole program is a failure, achievements in technology and science will have tremendous effect on our industry."

President de Gaulie hasn't convinced all his own countrymen that France needs a nuclear arm. Some French scientists apply themselves wholeheartedly to their work only because they believe peaceful byproducts will result; they have little regard for atomic weapons. A recent public opinion poll found only 42 percent in favor of the force de frappe, with 31 percent opposed and the rest undecided. But some parts of the program were launched a year or so before General de Gaulie even took office, indicating widespread support at high levels. Thus it is apparent that both Moscow and

Thus it is apparent that both Moscow and Washington will soon have to treat France as a nuclear power, however petite, and one that will probably be less inclined than ever to take outside advice.

o take outside advice.



HON. JOHN V. LINDSAY

IN THE HOUSE OF REPRESENTATIVES

Monday, March 4, 1963

Mr. LINDSAY. Mr. Speaker, the world has watched with growing alarm the intensification of anti-Semitism in the Soviet Union. The problems faced by Soviet Jewry are extremely serious. My good friend, Dr. Judah Cahn, spiritual leader of the Metropolitan Synagogue of New York, which is situated in the congressional district I represent, has

gressional district I represent, has written a timely article entitled, "The Dilemma of Soviet Jewry." It appeared in the winter 1962-63 edition of American Judaism. I am pleased to bring the article to the attention of my colleagues.

The text of the article follows:

THE DILEMMA OF SOVIET JEWRY

One of the tragic results of recent developments in the Soviet Union is the dilemma which now faces the 3 million Jews in that nation. The roots-of the dilemma are deep and complicated. It begins with the fact that within the Soviet Union, Jews are regarded not as a religious body but as a national minority. This was not always true. During the early years after the revolution, the Soviet Government had denied this status to the Jews.

The reversal of this decision was based ostensibly on the four-point definition of a nationality as promulgated by Stalin. He said that a nation or ethnic group should possess four characeteristics: a common land, a common language, a common culture, and common economic interests. Within the framework of this definition it would have been logically impossible to give the Jewish population of the Soviet Union the label of a national group.

Biro-Bidjan, a region in east Siberia, was established as an autonomous Jewish republic. This was an attempt by Soviet authorities to make the Jews in the Soviet Union conform to their definition. Of the approximately 20,000 Jewish inhabitants who were there during the early days, over 11,000 had left by 1934.

This so-called Jewish republic turned out to be an admitted failure. All the other republics had been created on the same lands already occupied by the people who were designated as citizens of that republic. The situation with the Jews was quite different. A piece of land in Siberia which did not even have a trace of previous Jewish occupation was turned into a Jewish "homeland." The fact that the Jews of the Soviet Union were located in the great cities of western Russia and played a very important part in the cultural and economic life of the country, made no difference. Did the Soviet authorities seriously expect these thousands of teachers, scientists, poets, actors, and musicians to leave the cultural centers of the U.S.S.R. and migrate to Biro-Bidian?

The results of these actions were inevitable. The Jews became a national minority group within the Soviet Union without possessing any of the advantages of such a designation. When choices were made for national posts in the many areas of Soviet life, the Jews could be designated only after all others who were citizens of that particular republic had been given the opportunity. The only place where it was possible for a Jew to receive preference over others would have been in Biro-Bidjan and in this barren spot there existed none of the institutions which permitted such participation. This also applied to college admission, professional training, and opportunities, which all depend on national identity.

Thus, the Jews became subject to the

Thus, the Jews became subject to the whims of the dictator. When Stalin thought it desirable, he utilized a literal interpretation of the law. When he thought it expedient, he utilized a loose interpretation.

During the life of Stalin, academic life was circumscribed by political expediency. The best of the Soviet academicians were harnessed to justify and rationalize the policies of the state. With the elimination of Stalin, this academic straitjacket was, for a time, loosened and matters heretofore forbidden for discussion were now brought into the open. At a meeting with Prof. Alexi Leondeyev, a member of the Presidium of the Academy of Special Sciences and chairman of the Department of Psychology at the University of Moscow, and Prof. Fidore Savakin, vice director of the Institute of National Schools and Professor of Methods of Teaching Language in the Professional School, this subject was first raised by me in the summer

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of 1956. Neither professor made any serious attempt to justify the designation of Jews as a national minority. In the course of the discussion, I pointed out that in my contacts with Jowlah university students, musicians, and government officials who were under the age of 35, I had found that they had either no knowledge or a sparse knowledge of Yiddish, which was supposed to be a national language for Soviet Jewry.

I indicated to Professor Savatkin that though he had organized schools and staffs for the teaching of approximately 50 languages, there were neither teachers nor texts for the teaching of Yiddish. A call was imnor the teaching of Yiddish. A can was immediately put in to the Lenin Library, and this point was confirmed. Though there were texts in Yiddish concerned with the teaching of other subjects, there wasn't a single text dealing with the teaching of Yiddish. dish. As far as Hebrew was concerned, both men refused to recognize it as a spoken tongue and referred to it as a language of prayer which was the concern and responsibility of the Jewish religious community. They claimed that they would neither help nor hinder such activities. When it was further charged that Jews were not permitted to create prayerbooks for the teaching of the language, this fact was attributed to the disinterest of Jews themselves: a common excuse among Soviet officials. Finally, both professors suggested that this was a vastly complicated question and that the complete assimilation of Soviet Jewry would be the desirable goal. Upon further discus-sion they admitted that the Jewish national group alone seemed superfluous in the eyes of the Soviet authorities.

The matter was then pursued with Prof. Ivan Podekhin, director of the Institute of Ethnology at the University of Moscow. This institute is responsible for the designation of national identities. After many hours of argument, it was finally divulged that the subject of Jewish identity was just then coming before the institute of stepre. then coming before the institute of ethnology for restudy. However, the research and discussions had not yet reached the stage where they could be made public. The latest information on this subject which we have been able to secure from the Soviet Union indicates that the problem of Jewish identity is now very much alive in Soviet academic circles.

This creates the dilemma for Soviet Jewry: whether to be or not to be a nationality. If national identity is taken from them, all that will be left will be a religious identity. In view of the fact that only a small minimum of Soviet 1000 to the production of the second of the secon nority of Soviet Jewry maintains identity

with the synagogue and that the members of this minority, for the most part, are well advanced in years, it would mean the virtual disappearance by assimilation of this vast segment of world Jewry. Hitler destroyed 6 million Jews. The Soviet Union is suggesting to 3 million more the possibility of mass cultural suicide. The other alternative is to cultural suicide. The other alternative is to seek to maintain Soviet Jewry as a national minority. This would mean the continuance of certain disabilities, and perhaps an intensification of the current anti-Semitle wave now prevalent in the Soviet Union. But it would make possible the maintenance of identity for these 3 million people and the hone for their eventual freedom. These of identity for these 3 million people and the hope for their eventual freedom. These millions of Jews also recognize that even cultural and religious suicide may not necessarily destroy the virus of anti-Semitism. Among those who were liquidated in the Stalin purges were many men and women who had not only relinquished their Jewish heritage, but had become the enemies of these with any lateral or retaining it. those who insisted on retaining it.

No other Jew in the world can make this

No other Jew III the world can make this decision for Soviet Jewry. Of course, it may be that Soviet Jewry will have little voice in determining its own destiny. But where shall they, as a community, apply the little strength that they may have?

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presented to either House, shall be referred immediately to the Committee on House Administration of the House of Representatives or the Committee on Rules and Administration of the House of Representatives or the Committee on Rules and Administration of the House of Rules and Administration of the House of Rules and Administration of the Rules and istration of the Senate, who, in making their report, shall give the probable cost of the proposed printing upon the estimate of the Public Printer, and no extra copies shall be printed before such committee has reported (U.S. Code, title 44, sec. 133, p. 1937).

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